

Intellectual Output 3

EntRENEW E-learning Platform

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RE	Restricted to a group specified by the consortium (including the Commission Services)	
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EntRENEW aims at increasing specific knowledge and knowhow of European students so that they may become effective entrepreneurs and leaders, who are able to address the challenges of Europe`s sustainable development and to accompany the transition of the energy sector towards decarbonization as part of the European Green Deal. EntRENEW`s objectives will be accomplished through the creation of a blended-learning course tailored to the needs of target groups operating in the field of entrepreneurship in renewable energy. The project involves six partners, coordinated by the Association Leonard De Vinci (ALDV), and it will be implemented between September 1, 2020 and August 31, 2023.

This publication only reflects the views of the authors, and the Commission cannot be held responsible for any use made of the information contained therein.

More information on the project can be found at <https://www.entrenew.eu/>

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1. Introduction

Intellectual Output 3 of the EntRENEW project focuses on the specification and development of an e-learning platform which addresses the learning needs of today's students in higher education, identified and outlined in the EntRENEW project and Entrepreneurship in Renewable Energy (ERE) course's innovative methodology (Intellectual Output1) via versatile interaction techniques.

Blended in its nature, the ERE course has been conceived to balance between in-class engagement, online interaction, and self-preparation. To serve the purposes of the blended form, the ERE e-learning platform has been designed and prepared as a supplementary tool for self-education and collaborative work (addressing group and individual assignments).

While this project result is thought and implemented to be in the form of a website, the current document aims at providing the rationale behind the design and functionality of the ERE course, its structure and logic, as well as the testing and improvement actions taken, and the final suggestions for further applications and improvement.

For having a complete experience of the ERE e-learning platform you may wish to register here: <https://www.entrenew.eu/register/>



2. EntRENEW e-learning platform characteristics, design, and functionality

2.1. Platform selection - Specifications

The ERE course e-learning platform is based on the free tool LearnDash+WordPress. Although the Consortium had initially envisioned using the free Moodle platform, a collective decision was made to go towards a WordPress solution for the smoother integration to the project website (already based on WordPress). WordPress ensures openness in the use and delivery of codes and avoids possible inconveniences for students having to log with two different profiles to Moodle (one for their university account and one for the project account). In some cases, in fact, HEIs' online materials are provided using the Moodle platform and students usually have university accounts.

To ensure the sustainability of the intellectual output and its further exploitation, the codes of the ERE learning management system (LMS) are available upon request. Please refer to Europroject Ltd., the intellectual output leader, to receive the open codes and instructions. Contact person: Polina Hitova, polina.hitova@europroject.bg; info@europroject.bg.

LearnDash is a WordPress LMS. It has been chosen also due to its versatility and to the availability of more options (as compared to Moodle) for the customization of the LMS integrations - gamification, quiz reward system, forums, customizable avatars, and badges. The structure and delivery of LearnDash courses is based on instructional design principles used in learning programs at Fortune 500 companies. It uses a top-level logic: Courses, Sections, Lessons, Topics, and Quizzes. Courses are divided into Sections; Lessons are assigned to Sections and Courses; Topics are assigned to Lessons, and Quizzes can be assigned to a Course, Lesson, or a Topic.

The terminology can be changed using custom labels, but the general structure remains the same. For example, "Lessons" can be renamed "Modules," "Quizzes" can be renamed to "Tests," and so on. The software itself has a variety of options, including adding functionalities for free and paid add-ons.



2.2. Platform configuration and access rights

The EntRENEW e-learning platform has been configured to enable external partners to work with it. The template pages for courses, lessons, topics, quizzes, questions, certificates, groups, assignments, reports have been added. To get a collaborator admin account for the platform, an inquiry to the Europroject technical provider outlined above needs to be made. Once registered, the collaborators can use the templates hosted here: https://www.entrenew.eu/wp-admin/edit.php?post_type=sfwd-courses

With each step there's a tutorial video on how the workflow is done. There is no coding, or any other complex operations required for a collaborator to publish a course.

A course may be established in 4 steps:

1. First, create a Course placeholder, which will contain all the Lessons.
2. Each Course can contain multiple Lessons and those Lessons can be grouped into Sections, if needed.
3. Each Lesson can contain multiple Topics, which is the final part of the nested content structure.
4. If needed, a Quiz can be added at the end of a Lesson, Course or Topic to validate the end user's knowledge and skills.

2.3. Platform structure and functionality

2.3.1. Getting started with the project LMS

There are 3 places on the EntRENEW project website that provide a direct link to the ERE course e-learning platform. A separate section on the main menu, named "Start/Register to the ERE course" just before the project landing page (Project Overview) leads to the registration page of the LMS. The landing page itself displays a button which leads to the same registration page (see Figure 1). Finally, there is a "Profile" section that leads to the whole project LMS.

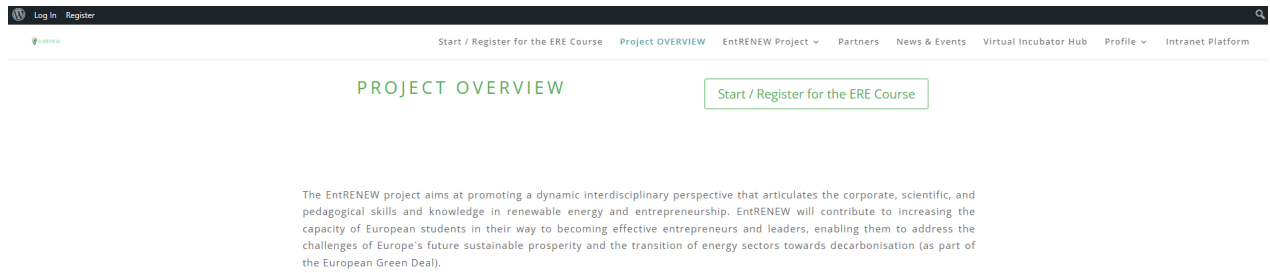


FIGURE 1 GETTING STARTED WITH THE PROJECT LMS

2.3.2. Overview of the project LMS

The first subsection of the “Profile” Section is “Register”. It requires minimum requirements for user identification and password strength. User authentication is provided via email for protection purposes.

On the right side, there is a Navigation Panel, outlining the structure of the ERE course to attract the user's attention and interest (see Figure 2).

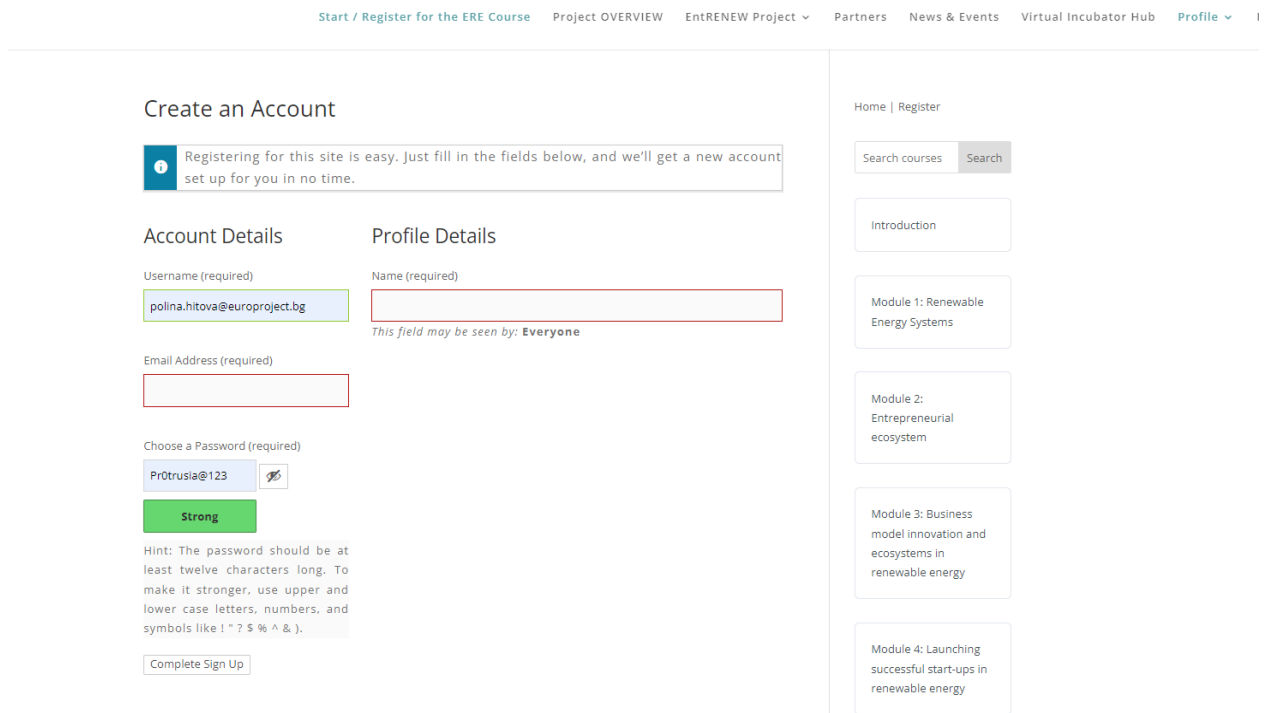


FIGURE 2 USER REGISTRATION



Once registered, the user is offered different opportunities to enhance their avatar for future activity and communication on the platform (see Figure 3). Options for Metaverse-style avatar, drawing-style avatar, Disney-style avatar, animation-style avatar, etc. are given.

Hi there! If you're taking this course which involves online activities, why don't you create an avatar to introduce yourself? Avatars are digital representations of individuals that can be customized to look like you or to reflect your personality. Creating an avatar can be a fun and creative way to personalize your online presence and engage with other learners.

To get started, you can use one of several avatar creation sites available online:

<https://readyplayer.me/> for a Metaverse-style avatar,

<https://avatarmaker.com/> for a drawing-style avatar,

<https://www.media.io/avatar-creator.html> for a Disney-style avatar,

<https://getavataaars.com/> for a simple style avatar, and

<https://avachara.com/avatar/> for an anime-style avatar. You can use your own personal photo as well.

Go ahead and give it a try!

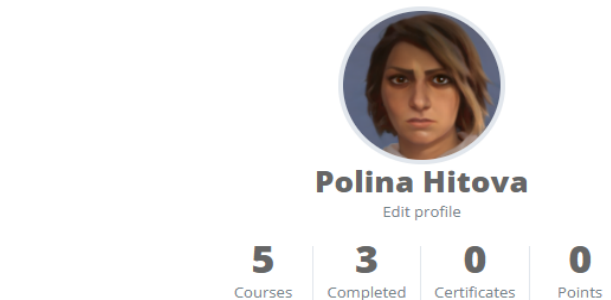


FIGURE 3 AVATAR CREATION

2.3.3. Login, Logout, Setting Sub-sections

The platform offers user-friendly and intuitive sub-sections for login, log out and settings' adjustments.

Upon logging in, information on the user progress in the course is provided in a synthesized way.

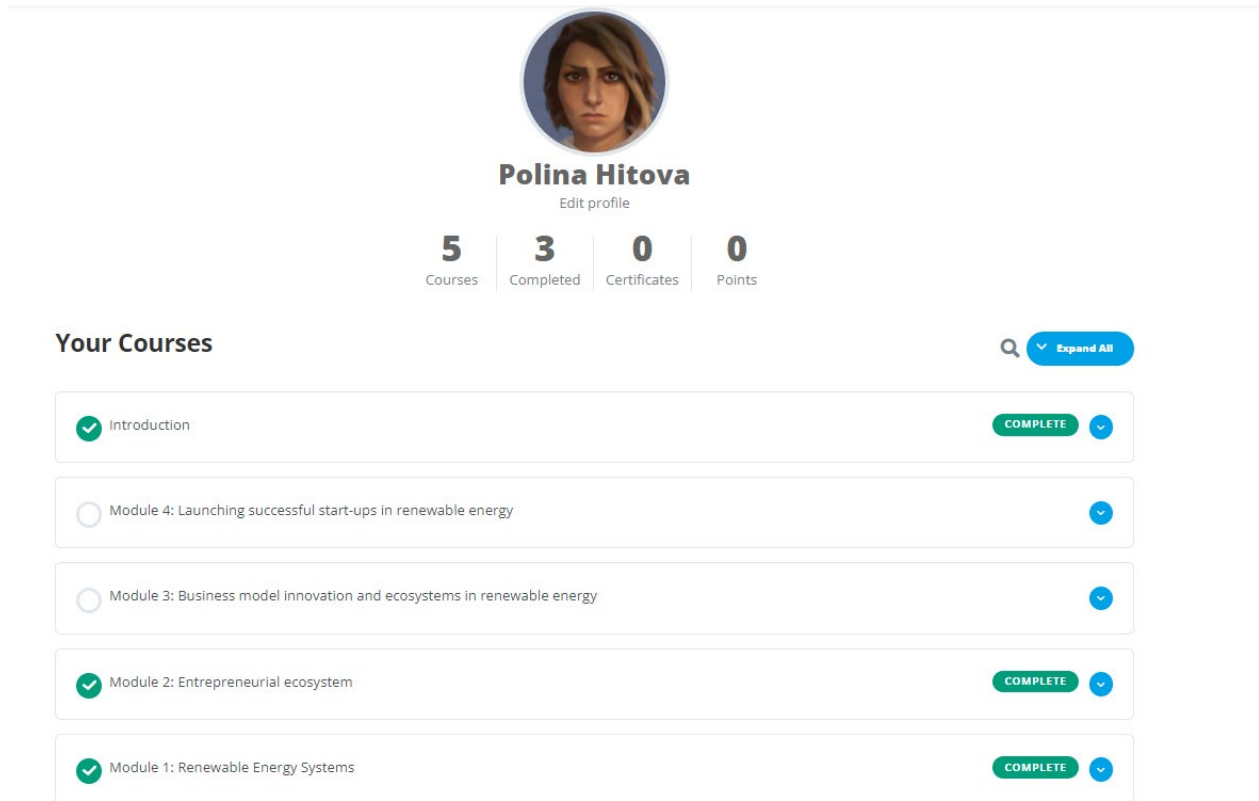


FIGURE 4 USER PROGRESS INFORMATION

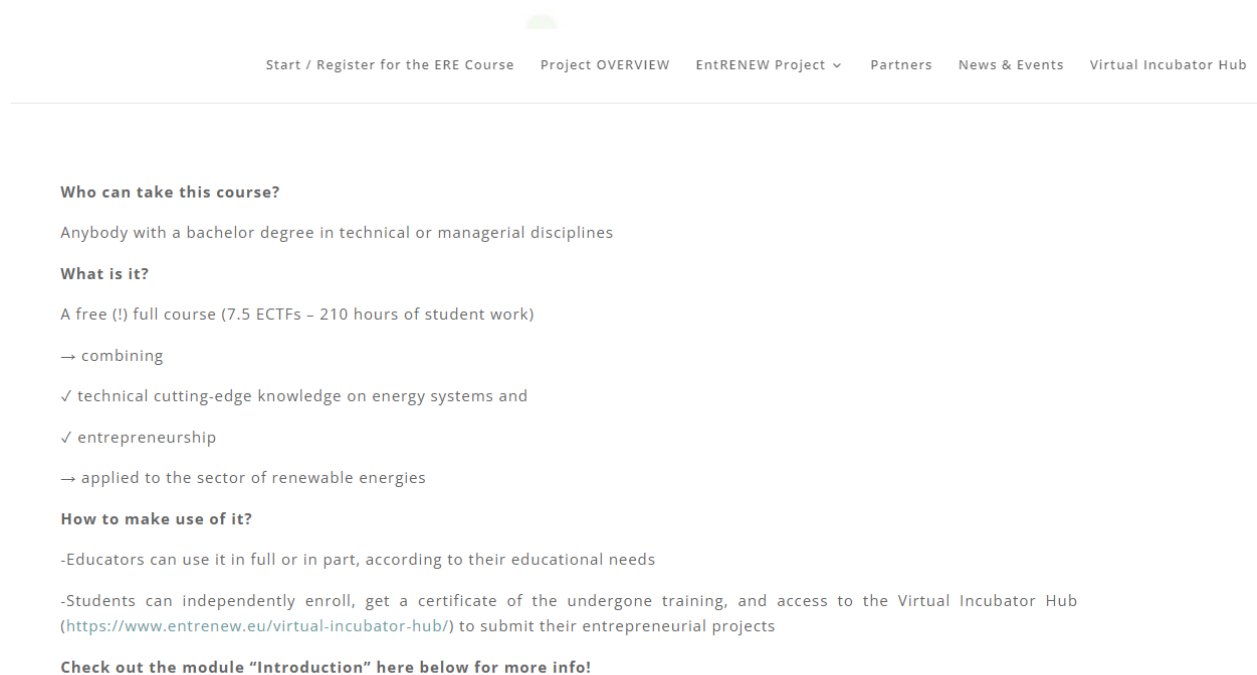
2.3.4. Course content’s Subsection

The course content’s subsection is the main one (see Figure 4). It offers the user the 4 course modules. The user needs to enroll in the course to be able to see its full contents. As soon as the user requests to be enrolled, the enrollment is immediate to ease the access of the learner and to offer her the possibility to explore the platform and the course. If the user is not enrolled, only the course’s general information is accessible to her, such as the gamification story item for the respective Introduction or Module, the Introductory video from a professor actively participating in the creation of the learning contents of the Module, and the course and modules’ outlines.

Only enrolled learners have access to the learning content in the different modules and constituting sections. Each topic ends with a quiz which the learner needs to pass with more than or equal to 80 % success rate to proceed further. The rationale behind this is to let learners go forward once they have gained the knowledge on the previous content. A quiz can be taken

several times. The right answers are not displayed so that the learner can look for them in the learning content and retake the quiz only after reviewing the section.

At the beginning of this section there is general information about the course, the ECTS and the learning objectives achieved by taking it (see Figure 5A).



The screenshot shows a navigation menu at the top with the following items: Start / Register for the ERE Course, Project OVERVIEW, EntRENEW Project (with a dropdown arrow), Partners, News & Events, and Virtual Incubator Hub. Below the menu, the page content is organized into sections:

- Who can take this course?**
Anybody with a bachelor degree in technical or managerial disciplines
- What is it?**
A free (!) full course (7.5 ECTFs – 210 hours of student work)
→ combining
 - ✓ technical cutting-edge knowledge on energy systems and
 - ✓ entrepreneurship→ applied to the sector of renewable energies
- How to make use of it?**
 - Educators can use it in full or in part, according to their educational needs
 - Students can independently enroll, get a certificate of the undergone training, and access to the Virtual Incubator Hub (<https://www.entrenew.eu/virtual-incubator-hub/>) to submit their entrepreneurial projects
- Check out the module "Introduction" here below for more info!**

FIGURE 5 A COURSE CONTENTS GENERAL VIEW

A more detailed description of the course and what the learners should expect as well as the intro to the gamification storyline could be found in the first section called Introduction (see Figure 5B). It also contains a video with greetings from the project coordinator - Prof. Irene Beccarini.

Modules

Free 100% of the year 2020

The frequency of natural disasters, their sizes, severity, droughts or floods, has raised since 2010. The average temperature has risen by 1°C Celsius. The Arctic sea ice has melted by 90%, and 1 million species are now threatened.

There will be increased focus on sustainability from all stakeholders. There has been a steady rise in energy prices, with this increasing with falling secondary electricity and the increasing cost of renewable energy production.

Companies have good business and development and social assets are rapidly increasing. The European Union has implemented a sustainable economic, climate and energy policy and has set a target of 32% of the energy to be generated by 2030. This is a significant step of a challenge in the current market.

You have been specially selected by the European identity of Erasmus+ program for the selected topic of developing renewable and commercial solutions to integrate and reduce the energy costs.

To prepare for this an excellent task, you are offered the chance to take this training and you are offered free of charge.

Introduction

[Continue Study](#)

Free **MODULE 1**

How do you create a business model for a renewable energy start-up? This module will explore the business model for a renewable energy start-up. It will cover the key elements of a business model, such as the value proposition, the revenue model, and the cost structure. It will also explore the challenges of creating a business model for a renewable energy start-up, such as the high initial costs and the long payback period.

Module 1: Renewable Energy Systems

[Enroll Now](#)

Free **MODULE 2**

What is an entrepreneurial ecosystem? This module will explore the concept of an entrepreneurial ecosystem and how it can be used to support the growth of renewable energy start-ups. It will cover the key elements of an entrepreneurial ecosystem, such as the network of actors, the culture, and the support services. It will also explore the challenges of creating an entrepreneurial ecosystem, such as the lack of resources and the lack of expertise.

Module 2: Entrepreneurial ecosystem

[Enroll Now](#)

Free **MODULE 3**

How do you create a business model for a renewable energy start-up? This module will explore the business model for a renewable energy start-up. It will cover the key elements of a business model, such as the value proposition, the revenue model, and the cost structure. It will also explore the challenges of creating a business model for a renewable energy start-up, such as the high initial costs and the long payback period.

Module 3: Business model innovation and ecosystems in renewable energy

[Enroll Now](#)

Free **MODULE 4**

How do you create a business model for a renewable energy start-up? This module will explore the business model for a renewable energy start-up. It will cover the key elements of a business model, such as the value proposition, the revenue model, and the cost structure. It will also explore the challenges of creating a business model for a renewable energy start-up, such as the high initial costs and the long payback period.

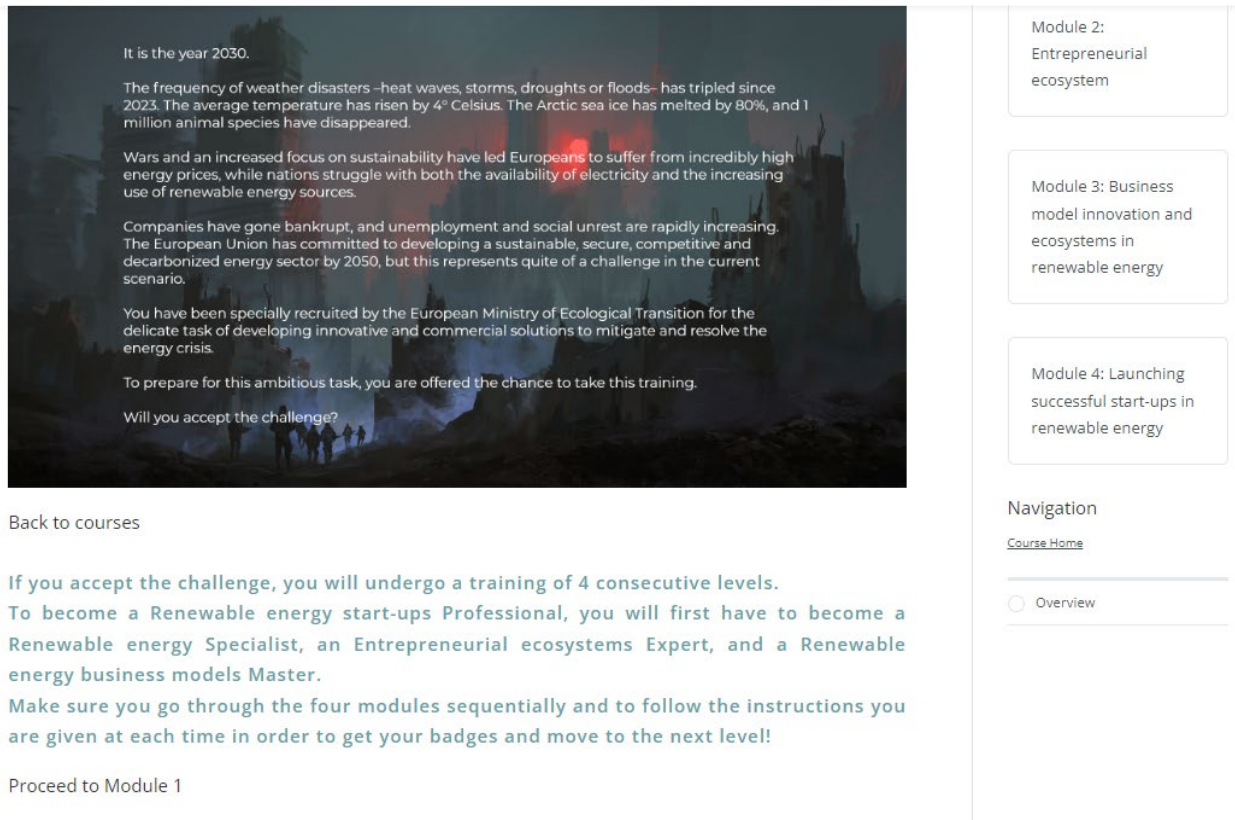
Module 4: Launching successful start-ups in renewable energy

[Enroll Now](#)

FIGURE 5 B COURSE CONTENTS GENERAL VIEW

In all pages there is a Navigation panel to the right side for quick access to course modules and subsections (see Figure 6).





The screenshot shows a course introduction page with a dark background image of a city at night. The text on the page reads:

It is the year 2030.

The frequency of weather disasters –heat waves, storms, droughts or floods– has tripled since 2023. The average temperature has risen by 4° Celsius. The Arctic sea ice has melted by 80%, and 1 million animal species have disappeared.

Wars and an increased focus on sustainability have led Europeans to suffer from incredibly high energy prices, while nations struggle with both the availability of electricity and the increasing use of renewable energy sources.

Companies have gone bankrupt, and unemployment and social unrest are rapidly increasing. The European Union has committed to developing a sustainable, secure, competitive and decarbonized energy sector by 2050, but this represents quite a challenge in the current scenario.

You have been specially recruited by the European Ministry of Ecological Transition for the delicate task of developing innovative and commercial solutions to mitigate and resolve the energy crisis.

To prepare for this ambitious task, you are offered the chance to take this training.

Will you accept the challenge?

Below the text is a "Back to courses" link. To the right is a side navigation panel with four module boxes:

- Module 2: Entrepreneurial ecosystem
- Module 3: Business model innovation and ecosystems in renewable energy
- Module 4: Launching successful start-ups in renewable energy

Below the modules is a "Navigation" section with a "Course Home" link and a radio button for "Overview".

At the bottom of the page is a "Proceed to Module 1" link.

FIGURE 6 COURSE INTRODUCTION AND SIDE NAVIGATION PANEL

In every page of the Course content / Modules there are further navigation buttons, such as “Proceed to Module 2” and “Back to courses” (see Figure 7).

Once completed a module, the user marks it as “complete” and proceeds forward through specific navigation buttons.

Course Progress

[Back to courses](#)

To unlock your badge as Renewable energy Specialist, make sure you go through the introductory video, as well as the course material on sustainability and the basics of energy.

Do not forget to take the quiz, and to do your best, since you will be competing against your fellow apprentices for the final ranking!

[Proceed to Module 2](#)



Introduction Module 1

Contents

- 1. Introduction: Sustainability and the 2030 Agenda**
 - 1.1 The evolution of Sustainable Development
 - 1.2 The 2030 Agenda
 - 1.3  pillars of sustainability
- 2. The Basics of Energy**
 - 2.1 Key concepts and definitions
 - 2.2 Energy transition
 - 2.3 Energy innovation

Watch on  YouTube

FIGURE 7 MODULE OVERVIEW AND INTRODUCTORY VIDEO WITH NAVIGATION BUTTONS “BACK TO COURSE” AND “PROCEED TO MODULE 2”

2.3.5. Achievements Sub-section

Upon successful completion of a Module, the user receives a respective Badge. They are leveled in hierarchical ways starting from a specialist and ending with a master. The Achievements Sub-section displays the badges the user has earned and the ones that are left to be gained to boost their sense of competition and strive to achieve results (see Figure 8).

Achievements

Filter:

Search:



Renewable energy Specialist

[Show Details](#) ▼



Entrepreneurial ecosystems Expert

[Show Details](#) ▼



Renewable energy start-ups Professionals

[Show Details](#) ▼



Renewable energy business models Master

[Show Details](#) ▼

Home | Achievements

Introduction

Module 1: Renewable Energy Systems

Module 2: Entrepreneurial ecosystem

Module 3: Business model innovation and ecosystems in renewable energy

Module 4: Launching successful start-ups in renewable energy

FIGURE 8 ACHIEVEMENT BADGES

Furthermore, upon the successful completion of the Module 1 to Module 3, the online learners receive a certificate for successful completion of the ERE course from the five partner HEIs, signed by the project coordinator Prof. Irene Beccarini (see Figure 9).





FIGURE 9: CERTIFICATE OF SUCCESSFUL COMPLETION OF THE ONLINE ERE COURSE

2.3.6. Forums and Groups Sub-sections

The collaborative spaces for the learners are the Forums and Groups Sub-sections. Each user can suggest and open a topic for discussion in the Forums space (see Figure 10). Collaboration is free expression of opinions.

The Groups section is managed by the educators who have administration access. They form groups and assign learners to work in teams.

Forums

Homepage > Forums

Forum	Topics	Posts	Last Post
Module 1 Forum Associated Courses and Groups: Module 1: Renewable Energy Systems	1	1	5 months ago admin_entrenew
Module 2 Forum Associated Courses and Groups: Module 2: Entrepreneurial ecosystem	2	2	1 month, 1 week ago Santiago Plazas
Module 3 Forum Associated Courses and Groups: Module 3: Business model innovation and ecosystems in renewable energy	1	1	5 months ago admin_entrenew
Module 4 Forum Associated Courses and Groups: Module 4: Launching successful start-ups in renewable energy	1	1	5 months ago admin_entrenew

Home

Introduction

Module 1: Renewable Energy Systems

Module 2: Entrepreneurial ecosystem

Module 3: Business model innovation and ecosystems in renewable energy

FIGURE 10 FORUMS SUB-SECTION



2.4. ERE course e-learning platform gamification

The EntRENEW Consortium realizes the challenges in today's learning environment where hybrid learning is more and more the new reality. Defining an efficient gamification scenario and strategy is thus crucial for attracting and retaining the interest of the learner in the ERE course. Please refer to Intellectual Output 5-Section 6 to get more insights on the pre-conditions and methods for establishing the right gamification for the right public.

2.4.1. Gamification elements

Based on the assumption that statistically learners predominantly fall in the two learners' categories of Communicators and Achievers, the gamification strategy is based on setting an engaging mission at the beginning and gaining more skills and qualifications with each earned sub-mission (module) by the time the learner becomes a Master in Renewable Energy Business Models.

Each module contains the mission set for the module in a picture box with the script text and influential music corresponding to the mission (see Figures 11-15).

2.4.2. Gamification scenario

The Gamification scenario follows the learning contents in each module.

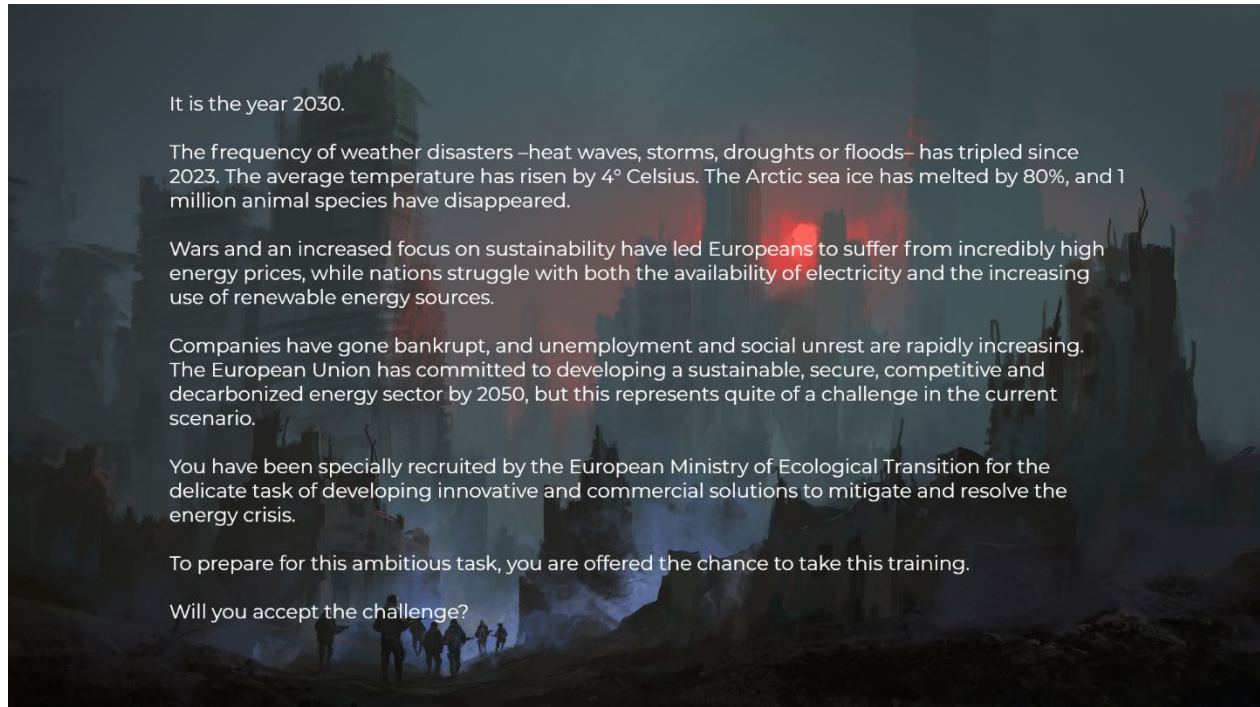
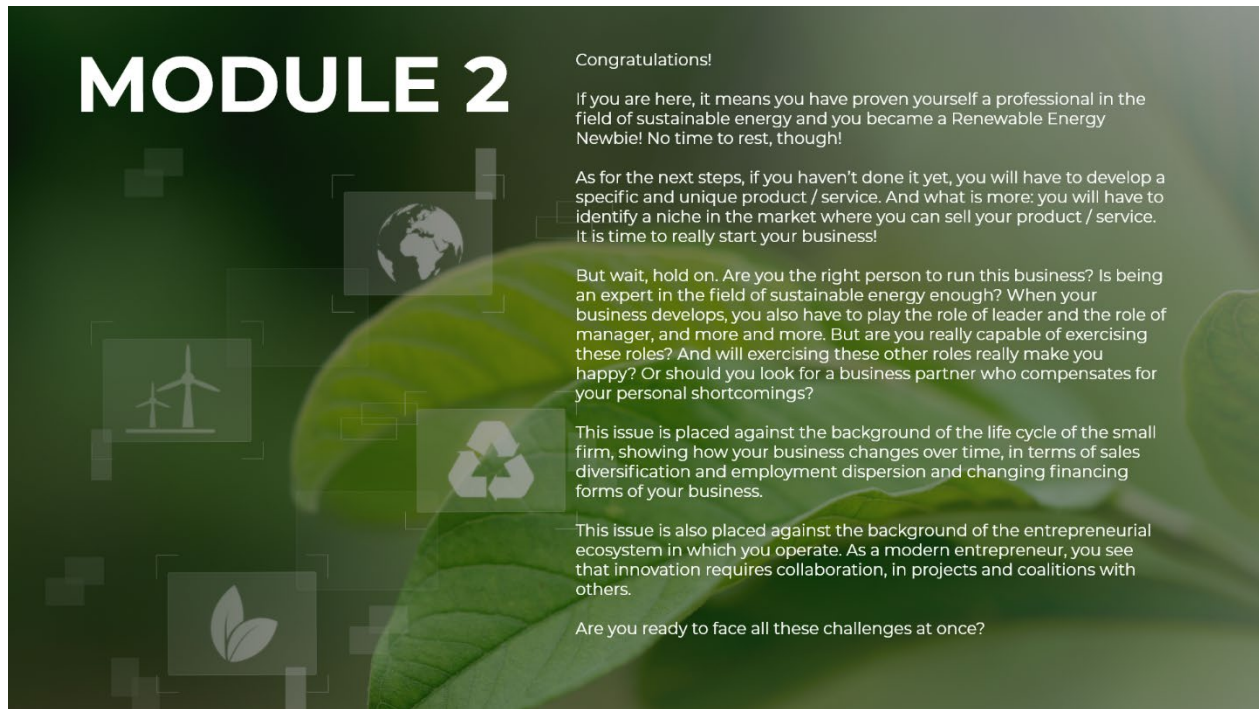


FIGURE 11: INTRODUCTION



FIGURE 12: MODULE 1: RENEWABLE ENERGY SYSTEMS



MODULE 2

Congratulations!

If you are here, it means you have proven yourself a professional in the field of sustainable energy and you became a Renewable Energy Newbie! No time to rest, though!

As for the next steps, if you haven't done it yet, you will have to develop a specific and unique product / service. And what is more: you will have to identify a niche in the market where you can sell your product / service. It is time to really start your business!

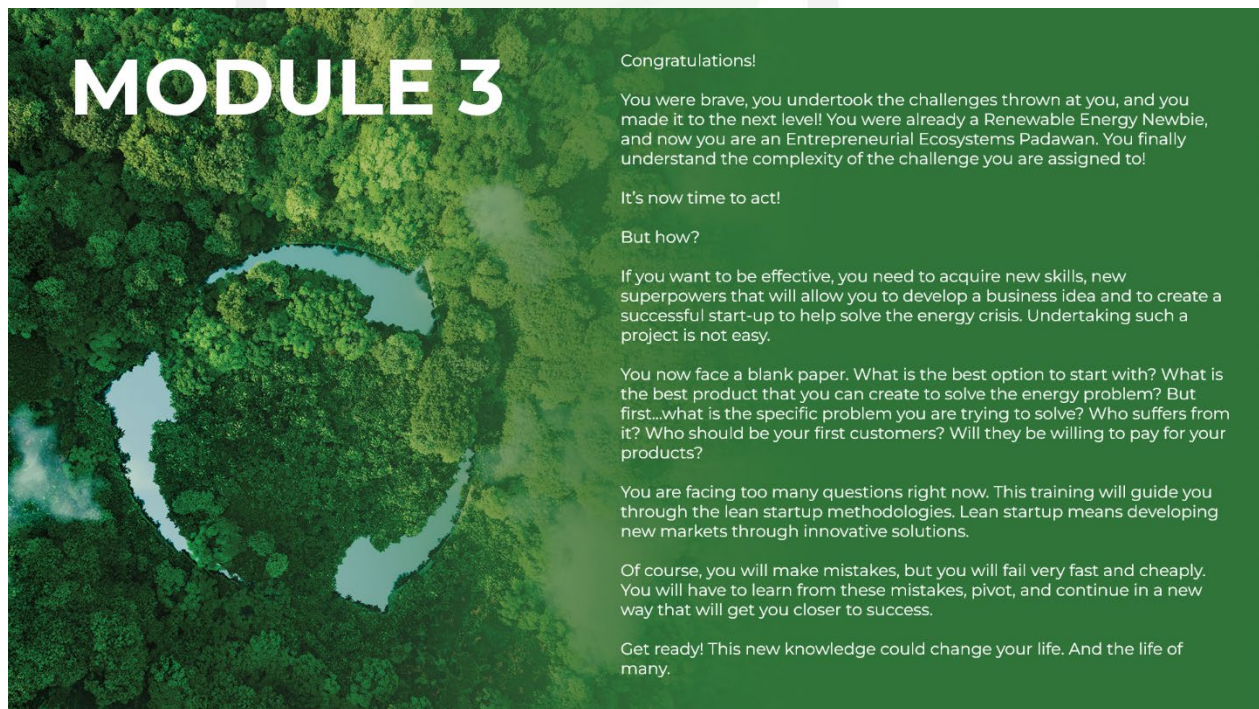
But wait, hold on. Are you the right person to run this business? Is being an expert in the field of sustainable energy enough? When your business develops, you also have to play the role of leader and the role of manager, and more and more. But are you really capable of exercising these roles? And will exercising these other roles really make you happy? Or should you look for a business partner who compensates for your personal shortcomings?

This issue is placed against the background of the life cycle of the small firm, showing how your business changes over time, in terms of sales diversification and employment dispersion and changing financing forms of your business.

This issue is also placed against the background of the entrepreneurial ecosystem in which you operate. As a modern entrepreneur, you see that innovation requires collaboration, in projects and coalitions with others.

Are you ready to face all these challenges at once?

FIGURE 13: MODULE 2: ENTREPRENEURIAL ECOSYSTEM



MODULE 3

Congratulations!

You were brave, you undertook the challenges thrown at you, and you made it to the next level! You were already a Renewable Energy Newbie, and now you are an Entrepreneurial Ecosystems Padawan. You finally understand the complexity of the challenge you are assigned to!

It's now time to act!

But how?

If you want to be effective, you need to acquire new skills, new superpowers that will allow you to develop a business idea and to create a successful start-up to help solve the energy crisis. Undertaking such a project is not easy.

You now face a blank paper. What is the best option to start with? What is the best product that you can create to solve the energy problem? But first...what is the specific problem you are trying to solve? Who suffers from it? Who should be your first customers? Will they be willing to pay for your products?


You are facing too many questions right now. This training will guide you through the lean startup methodologies. Lean startup means developing new markets through innovative solutions.

Of course, you will make mistakes, but you will fail very fast and cheaply. You will have to learn from these mistakes, pivot, and continue in a new way that will get you closer to success.

Get ready! This new knowledge could change your life. And the life of many.

FIGURE 14: MODULE 3 BUSINESS MODELS INNOVATION AND ECOSYSTEMS IN RENEWABLE ENERGY

MODULE 4



Congratulations!

You are now a Renewable Energy Business Models Jedi! As such, you know that there are only two types of people. The ones who make excuses and the entrepreneurs.

It's now time to show what group you belong to!

This last part of your training is purely practical.

First, you will need to design a business model that works on a piece of paper. Of course, creating something that works on a piece of paper is much easier than creating something that works in the real world.

But we assure you that making things work theoretically is not easy either!

After building your business model, you will need to design a plan to validate all the assumptions that you have made.

Remember, time is one of your most valuable assets, so do not waste it!

Make sure you validate fast by creating great minimum valuable projects. And if you fail, do not worry too much. Go back to the paper and start again, changing the items you have unvalidated.

This will make you closer to success!

Are you ready to put all you have learnt in practice and start making things happen?

The future is yours. You are this world's last hope.

FIGURE 15: MODULE 4: LAUNCHING SUCCESSFUL STARTUPS IN RENEWABLE ENERGY



3. The ERE course testing

The ERE course e-learning platform was tested by the 14 students who followed the full length of the blended learning course in Vrije University Amsterdam, by at least 10 students from each partner university within their regular classes or at home. Additionally, there was platform testing immediately after the project multiplier events. At least 100 users took part in the platform testing. Below is the platform assessment questionnaire and a summary of the feedback for platform improvement received by testers.

3.1. Platform assessment survey

Name of the organization:

Name and position of the person testing the E-learning platform:

Period of testing: [From ... To ...]

Date of filling the Feedback form:

Please, evaluate the following statement where: 5 – strongly agree; 4 – agree; 3 – neutral/average; 2- disagree; 1 – strongly disagree; N/A – Not applicable.

Technical Side

1. It was easy for me to access the EntRENEW E-learning platform.
If not why, in which area/section:
Please provide suggestions of improvements, if any:
2. I felt comfortable using the EntRENEW E-learning platform.
If not why, in which area/section:
Please provide suggestions of improvements, if any:
3. It was easy for me to learn how to use the EntRENEW E-learning platform. It was intuitive to use.
If not why, in which area/section:
Please provide suggestions of improvements, if any:
4. I needed the technical support of a technical person to work with the EntRENEW E-learning platform.



- If yes, in which part:
- Please provide suggestions of improvements, if any:
5. If I made a mistake using the platform, I recovered easily and quickly.
Please describe if this is the case:
6. The EntRENEW E-learning platform consistently and is stable.
If now, please elaborate in which area/section:
7. There were some technical errors during my testing experience.
If yes, please enumerate and shortly describe here:
8. The functions provided within the EntRENEW E-learning platform were appropriate for such kind of a tool.
If not why, in which area/section:
Please provide suggestions of improvements, if any:
9. The different sections of the EntRENEW E-learning platform loaded in tolerable amount of time.
Please indicate sections/areas which this required more time:
10. The gamification elements – gamification storytelling, badge-related rewarding system, sound and visual effects - of the EntRENEW E-learning platform were indeed engaging and motivational to move forward.
If not why, in which area/section:
Please provide suggestions of improvements, if any:
11. I had fun time editing my profile.
If not why, in which area/section:
Please provide suggestions of improvements, if any:
12. I appreciate and I think I can make use of the forums and groups within the e-learning platform.
If not why, in which area/section:
Please provide suggestions of improvements, if any:
13. The graphical organisation of information on the screen is clear enough.
If not why, in which area/section:
Please provide suggestions of improvements, if any:
14. The overall visual appearance of the platform is visually pleasant and relevant for the main auditorium – students and young entrepreneurs.
If not why, in which area/section:
Please provide suggestions of improvements, if any:

Thank you for your cooperation!



3.2. Platform assessment summary

The following report presents a comprehensive summary of the feedback received during the testing sessions, encompassing various aspects of the EntRENEW platform's design, functionality, user experience, and gamification elements. The insights gained from these feedback sessions are instrumental in further enhancing the platform and delivering an exceptional learning experience for future users.

1. Login and Registration:

- Students suggested that the login page should have a smoother layout, with clearer instructions for new users.
- Students recommended using "Forgot password" as a link instead of the headline "Reset password" for a more intuitive experience.
- The use of dynamic time recognition for personalized greetings during login (e.g., "Good morning" or "Good evening") was suggested to add a personal touch.

2. Navigation and User Interface:

- Several students found the platform's navigation confusing, and there were requests to adjust the layout of links and make buttons more salient.
- It was suggested to have a clearer distinction between modules and module contents to enhance user understanding.
- The "Start" and registration process should be better integrated, and the platform should guide users to more relevant content after logging in.

3. Visual Design and Content:

- Students appreciated the layout design and color scheme of the platform.
- Suggestions were made to improve the font size and readability of text, as well as the quality of images in the module content.
- Some students felt that more interactive elements, animations, and engaging graphics would make the platform more attractive.

4. Audio and Sound Effects:

- The intro music was seen as unsettling and not well-matched with the content. Students recommended using calming and more relevant music for a better user experience.
- Audio should stop automatically when starting a video.

5. Gamification Elements:

- The progress tracking and quiz results were appreciated, but concerns were raised about the ability to read quiz answers and retake quizzes immediately. Recommendations included limiting the number of quiz retakes within a time frame and revealing quiz answers after the submission period to maintain course integrity.
- Students desired more interactive aspects and clearer instructions on how to earn achievements within the platform.
- Students noted that, after being exposed to a nice introduction about the challenge, the course content is not presented in an attractive way (just the ordinary), so they said that the user can lose interest by taking the course.

6. Accessibility and Inclusivity:

- Concerns were raised about the platform's accessibility for visually impaired participants. Improvements such as larger font sizes, subtitles, and keyboard navigation were suggested.
- The search bar/button should be improved to help users find related subjects and content.

7. Social Interaction and Engagement:

- Students expressed a desire for more social interaction features, such as chatbots and Q&A sessions, to enhance engagement and community building.

8. Assignment and Peer-Review:

- Clarification on how to upload assignments and participate in peer-review sessions was requested to improve the user experience.

Summary and Action Points: The feedback from master students has provided valuable insights into the strengths and areas for improvement in the EntRENEW platform. Action points based on this feedback are as follows:

1. Enhance the login and registration process with a smoother layout and clearer instructions.
2. Personalize greetings during login for a more engaging experience.
3. Improve navigation and user interface by highlighting relevant buttons and links, and streamline the transition from login to relevant content.
4. Address visual design issues, including font size, image quality, and the addition of more interactive elements and animations.



5. Review audio and sound effects to ensure they match the platform's content and provide a positive user experience.
6. Fine-tune gamification elements to prevent potential misuse and provide clearer instructions for earning achievements.
7. Enhance accessibility for visually impaired participants through larger font sizes, subtitles, and improved keyboard navigation.
8. Integrate more social interaction features, such as chatbots and Q&A sessions, to enhance user engagement.
9. Provide clearer instructions for assignment submission and peer-review processes to improve user experience.
10. Videos should be embedded on the website instead of being presented as YouTube videos. After watching a video, lots of advertisements pop-up, and can disturb the user's attention.
11. Consider creating a more interactive and entertaining start to the course to captivate users from the beginning.
12. To give a more immersive experience, the stories should be presented in full screen. Also, there should be a voice reading the introductory text, so it would help to create a more "game" atmosphere.
13. The course platform should be different and separated from the project website.
14. The platform should inform the time students should spend to take each course activity before they enroll in the module.
15. The platform, commands and buttons should be more intuitive.

By addressing these action points, the EntRENEW platform can be further refined and optimized to provide an exceptional and inclusive learning experience for all users. The students' feedback has proven invaluable in identifying areas for improvement, and their suggestions can significantly contribute to the platform's success and user satisfaction.

3.3. Conclusions

Partners have decided collectively on the possibility of modifying the platform according to the needs of the users. Europroject then took steps to enhance the e-learning platform accordingly.

Among the steps taken are:

- Improvement of login process
- Improvement of navigation, adding more navigation options within the sections and subsections of the LMS
- Improvement of the readability of the texts



- Improvement of social interaction
- Improvement of the intuitiveness of the platform buttons and navigation.

Consideration for the future exploitation of the platform:

- Its adaptation to comply with the rules of accessible web
- Its separation from the project website to deliver a more user immersive experience, incl. full screen, short movies for the gamification scenes, etc.
- Enhance its peer-review options with interactive components and rewarding system
- Review audio and sound effects.



4. EntRENEW Virtual Incubation Hub

Following the feedback of the learners who participated in the pilot of the blended learning ERE course, it became clear that the preferred form of receiving mentoring and coaching for generating and incubating entrepreneurial ideas remains physical meetings and guidance. Online support is regarded as supplementary to the in presence one. The project partners' incubation opportunities demonstrate multiple success stories in providing incubation in a hybrid manner.

What young entrepreneurs are missing the most is the connections and the right choice of incubation, coaching and mentoring service, rather than the online environment for that. Following the needs expressed by the learners, project partners have decided to establish the EntRENEW Virtual Incubation Hub in a simple yet rather informative and supportive manner (see Figure 15).

The Virtual Incubation Hub enlists the incubation, pre-acceleration and acceleration opportunities each of the partnering HEI offers, with contact details for direct connection with the responsible persons and possibility of free advice. Other opportunities outside the project Consortium are also available with obtained consent for cooperation with EntRENEW learners.

Welcome to the Virtual Incubator Hub

The main function of this virtual incubator hub is to help you to further develop your start-up in a content-related way. Your start-up in renewable energy already has been created and now you are ready to take the next step in its development. Therefore this virtual incubator hub gives you access to the main programs that the five partners of the Erasmus+ project offer their start-ups locally. This is really a broad palette of programs, that are now classified by partner only, a link provided with one sentence for clarification. So you have to choose yourself which program to consult. For instance, if you need connection to corporates, check Energy Spin via University of Vaasa. That is just a good example, but we offer many more options. These are not the only programs that the five partners of the Erasmus+ project run or know about. If you require more information, please contact info@entrenew.eu

The five partners of the EntRENEW project offer the following support:

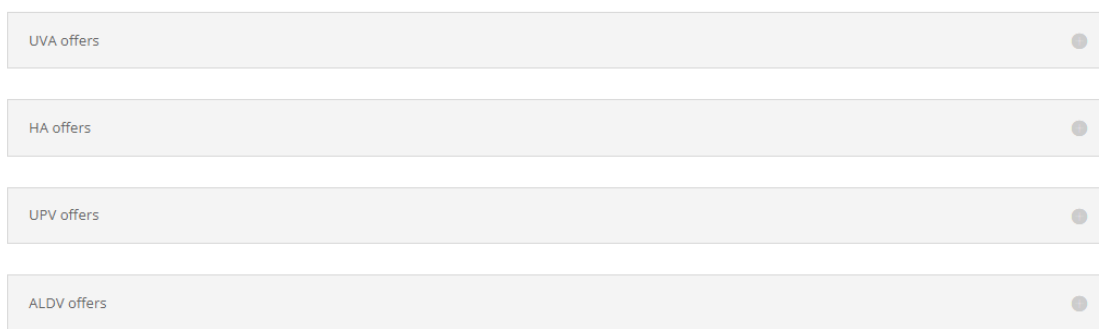


FIGURE 15 VIRTUAL INCUBATION HUB

